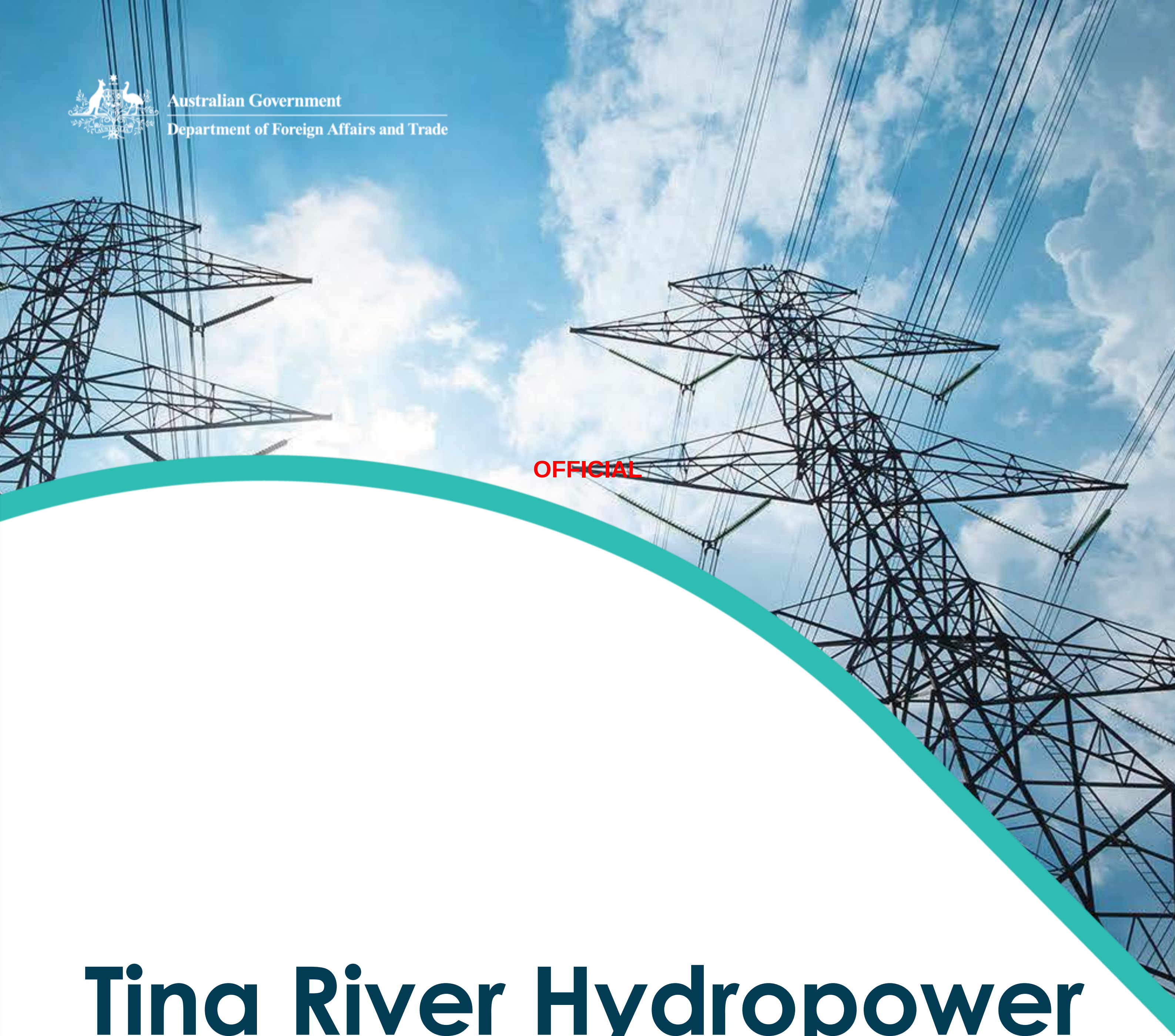
Australian Government
Department of Foreign Affairs and Trade

OFFICIAL

Project Status: This paper provides a detailed overview and business case of the financing proposal as at the time it was received and endorsed by the AIFFP Board. Some aspects of the proposal may have changed following subsequent negotiations or during implementation.

Note: Sensitive and confidential information has been removed to enable publication



OFFICIAL

Tina River Hydropower Transmission System

Business Case

Considered by the AIFFP Board on 19 March 2020

Tina River Hydropower Transmission System

Datasheet

1. Project Metrics			
Project Objective	For the Solomon Islands Electricity Authority (SIEA), the state owned electricity utility, to develop 22km of transmission line and associated power station upgrades (the 'Project'), by end 2023, to connect the Tina River Hydropower Project to the Honiara electricity grid and distribution network.		
Countries Impacted	Solomon Islands	**Sector**	Electricity

2. Country Analysis	
Project alignment to Infrastructure Priorities	*Yes*
Debt Sustainability	*Solomon Islands: at Moderate risk of debt distress*
MDB Eligibility	*IDA: 50-50, grants/credits (on small economy terms)* *ADB: 50-50, grants/Concessional lending*

3. Developmental Impact	
Sustainable Development Goals	Goal 7: Affordable and Clean Energy Goal 13: Climate Action
Related DFAT policies	Strategy for Australia's Aid Investments in Infrastructure Australian Aid: Promoting Prosperity, Reducing Poverty, and Enhancing Stability Gender Equality and Women's Empowerment Strategy 2017 Foreign Policy White Paper

4. Risk:

Risk element	Reputational	Country	Financial	Compliance	Implementation
DFAT Rating	Low	High	High	Moderate	Moderate
DFAT Risk Weighting	*20%*	*15%*	*15%*	*30%*	*20%*
Overall Risk Rating					
DFAT Rating	Moderate				

5. Financing

	Financial Close:	Q3 2020

6. Proposed AIFFP Package

Recipient	Segment	Capital type	Face value	Disbursement Period
SIEA, with sovereign guarantee provided by the Solomon Islands	*SOE/Sovereign*	*Loan* *Grant* *Total*	USD 10.6 m / AUD 15.7 m USD 12.3 m / AUD 18.3 m USD 22.9 m / AUD 34.0 m (Based on AUD/USD = 0.675)	2020 - 2023

Contents

Abbreviations

ADB	Asian Development Bank
ARAP	Abbreviated Resettlement Action Plan
BOOT	Build Own Operate Transfer
DMAC	Debt Management Advisory Committee
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
EFA	Export Finance Australia
EIRR	Economic Internal Rate of Return
EOCC	Economic Opportunity Cost of Capital
EPBC Act	Environment Protection and Biodiversity Conservation Act
ESIA	Environmental Social Impact Assessment
ESMP	Environmental Social Impact Plan
FDD	Final Detailed Design
GAP	Gender Action Plan
GWh	Gigawatt hours
IFC	International Finance Corporation
IMF	International Monetary Fund
IPP	Independent Power Producer
LIC	Low Income Country
MERE	Mines, Energy and Rural Electrification
MW	Megawatt
NCBP	Non-Concessional Borrowing Policy
OICP	Open International Competitive Procurement
PAM	Project Administration Manual
PFMA	Public Financial Management Act
PMU	Project Management Unit
PPA	Power Purchase Agreement
QCBS	Quality and Cost-based Selection
RAB	Regulated Asset Base
SBD	Solomon Bokolo Dollar
SIEA	Solomon Islands Electricity Authority
SIG	Solomon Islands Government
SOE	State Owned Enterprise
THL	Tina Hydropower Limited
WACC	Weighted Average Cost of Capital

1. Project overview

The Tina River Hydropower Transmission System (the 'Project') is enabling infrastructure that will transmit power from the Tina River Hydropower Development Project (the 'Hydropower Project') to the Solomon Islands' capital of Honiara. The Hydropower Project, including the transmission system which makes up the Project, is the top infrastructure priority of the Solomon Islands Government and has been under development for over a decade supported by a range of international donors. In July 2019, the Solomon Islands Government requested AIFFP to financially support the Project. This request follows support already provided by DFAT's bilateral aid program to develop the Hydropower Project.

The Project will be delivered by state-owned Solomon Islands Energy Authority (SIEA), and will connect the Hydropower Project to the main electricity distribution point in east Honiara, Lunga Substation, enabling dispatch of electricity from the Hydropower Project. The Project includes 22km of transmission and connection works at the Tina River and Lunga Substations (infrastructure works). The Project is a necessary component of the larger Hydropower Project as it enables the electricity generated to be distributed to the main grid, and on to end users.

The AIFFP is proposing a financing package totalling USD 22.9 million, comprising of a USD 10.6 million loan (denominated in USD) and AUD 17.9 million grant (denominated in AUD). SIEA and Solomon Islands Government (SIG) will finance (SIEA) and Solomon Islands Government (SIG) will finance the remainder. The proposed AIFFP financing package will make a critical contribution to the viability of the Hydropower Project as a whole.

Importantly, SIEA is a State Owned Enterprise (SOE), wholly owned by SIG. SIEA's financial obligations under the loan will be guaranteed by SIG. AIFFP's underlying credit exposure sits with the Solomon Islands, therefore, SIEA is a "sovereign borrower" and, in accordance with paragraphs 63 and 65 of the AIFFP Design Document, AIFFP loan pricing and terms reflect those offered by Multilateral Development Banks (MDBs) to the Solomon Islands. Consequently, the pricing and terms of the proposed AIFFP loan do not fully reflect Project, SIEA or SIG risk.

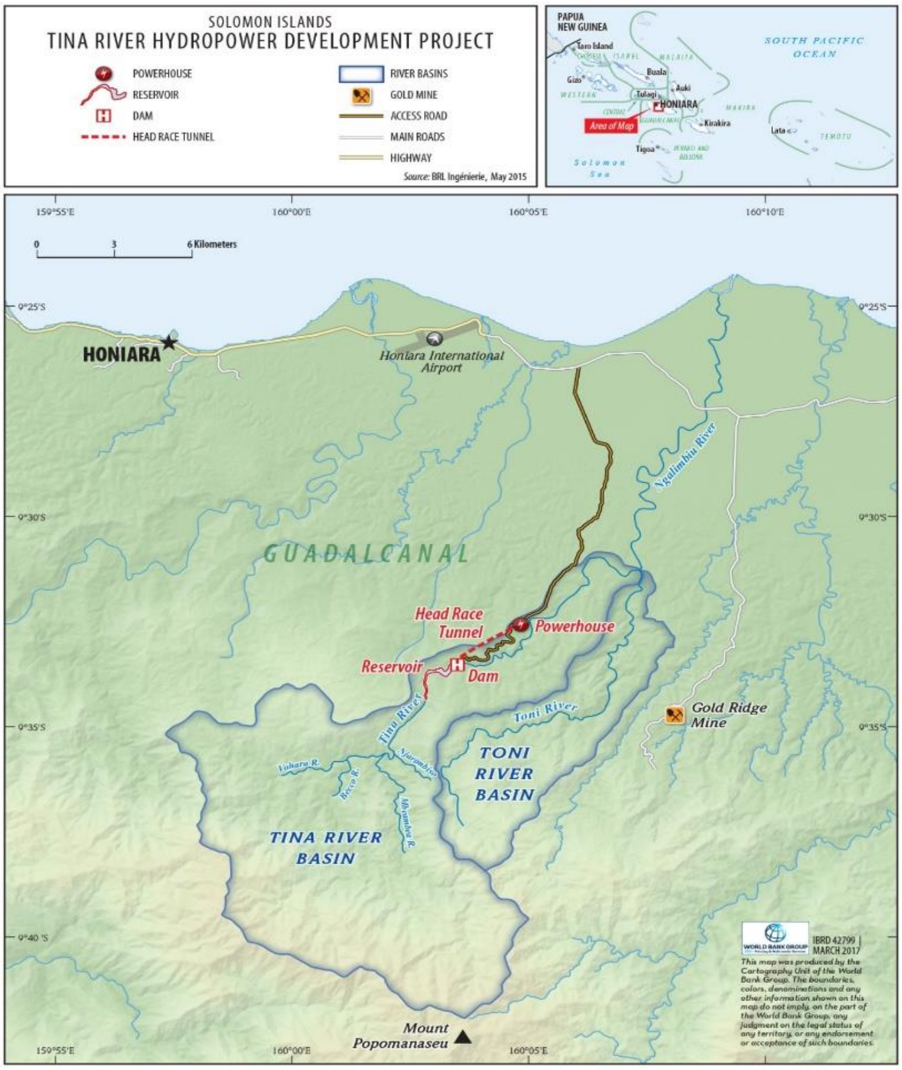
Background – Hydropower Project

The Hydropower Project will have an electricity generating capacity of 15 MW, which is a significant proportion of Honiara's current peak demand (~16 MW), and is expected to generate 70 – 80 gigawatt hours (GWh) per annum. This equates to approximately 73 – 83% of Honiara's usage in 2018. Currently, the majority of Honiara's electricity demand is met through diesel generation. The primary and most direct benefit of the Hydropower Project, and the Project, will be a reduced reliance on diesel generation, which is expected to reduce the cost and increase the reliability of electricity generation in Honiara. This will reduce end user tariffs for both residential and commercial customers. This is expected to promote both economic and social benefits for Honiara and the Solomon Islands.

The Hydropower Project will meet 100 per cent of Solomon Islands' international commitment for emissions reduction under the Paris Agreement. It will also contribute to the AIFFP's climate infrastructure window as announced by Prime Minister Morrison on 13 August 2019.

The Hydropower Project is being developed approximately 20km south-east of Honiara. A map showing the location of the Hydropower Project is provided below.

Map[1] - Location of Hydropower Project area



The Hydropower Project is a fully financed Public-Private Partnership. It is being developed by a private sector proponent under a Build-Own-Operate-Transfer (BOOT) arrangement. A Power Purchase Agreement (PPA) between the project sponsor, Tina Hydro Limited (THL), an entity that is majority owned by K-water (water utility from Korea), and SIEA as 'Offtaker', closed in December 2019. SIEA's payment obligations under the PPA are also guaranteed by the Solomon Islands.

Financing for the Hydropower Project has been committed by a consortium of financiers, led by the World Bank. Financial close of the Hydropower Project financing package was reached in December 2019. Australia, through the bilateral aid program, provided AUD 10.4 million to support the preparation phase of the Hydropower Project, playing a key role in facilitating the partnerships between SIG, SIEA, K-Water and donors. Australia is also providing AUD 18.4 million (2017-2024) to contribute to the access road to the dam site and to support the Tina River Project Office, bringing the total Australian commitment to date to AUD 28.8 million.

[1] Source: World Bank, International Development Associate (IDA) Project Appraisal Document (PAD), 2018

The Hydropower Project has a long history - first studied in detail by the World Bank in 2006, with a pre-feasibility study completed in 2007. Construction of the Hydropower Project has now commenced. The Hydropower Project infrastructure consists of an access road, dam, tunnel, powerhouse and switchyard. Transmission infrastructure, to connect the Hydropower Project to the Honiara distribution grid, is not included within the scope of works for the Hydropower Project and is not provisioned to be delivered through the PPA. However, the PPA contractually obligates SIEA to develop and have ready, by 2023, the transmission system, which exposes SIEA to direct financial loss if the Project is not completed and commissioned by 2023. Specifically, SIEA will be obligated to pay penalties under the PPA and make capacity payments to THL for dispatchable electricity, which it is unable to transmit, distribute and earn revenue on.

2. Strategic intent and alignment

This Project meets the project objectives as outlined in AIFFP's mandate.

Objective 1. The proposed project is located in one or more countries in the Pacific Islands Forum region (excluding Australia and New Zealand) or in Timor-Leste

The Project is wholly delivered within Solomon Islands. The 2017 Australian Foreign Policy White Paper recognises that the stability and economic progress of Pacific island countries and Timor-Leste is fundamental to Australia.

Objective 2. The proposed project demonstrates a broad public benefit and/or transformative effect to the economic development of host countries.

The Project is critical to realising the benefits of the renewable energy generated by the Hydropower Project for communities in Honiara. The Project will contribute to cost effective and reliable electricity for the people of Honiara and the surrounding areas. The Hydropower Project, including the Project, will make electricity more affordable by reducing the cost and increasing the reliability of energy. The current retail tariff in Solomon Islands ranges between USD 0.69-0.88 / kWh[2], whilst the average annual household income in Honiara is only USD2,700[3]. It is evident, when comparing to retail electricity costs in Australia, where average retail tariffs fall within a range of USD 0.16-0.25 / kWh, that electricity consumption in the Solomon Islands is currently prohibitively unaffordable. Reductions in the price of electricity would result in a range of benefits across the economy, including for small business and productive enterprise, and by increasing government capacity to provide critical services.

Once up and running, the Tina River Hydropower Project will demonstrate the viability of large infrastructure projects being delivered through public -private partnerships and encourage further foreign and domestic investment in Solomon Islands and the Pacific.

The Project will deliver climate mitigation (emission reductions) and resilience outcomes by supporting the Solomon Islands transition from reliance on diesel imports to domestic renewable energy sources. The Hydropower Project will meet 100% of Solomon Islands' international commitment for emissions reduction under the Paris Agreement. It will also contribute to the AIFFP's climate infrastructure window as announced by Prime Minister Morrison on 13 August 2019.

Objective 3. The proposed project reinforces Australia's relationships with host countries and supports a stable and prosperous region.

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[2] SIEA published tariff - http://solomonpower.com.sb/wp-content/uploads/2020/02/March-Tariff.pdf

[3] United Nations Committee for Development Policy Vulnerability Profile of Solomon Islands - https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/CDP-PL-2018-6e.pdf

The Hydropower Project is a key priority for SIG. The Project is a critical element of the overall Hydropower Project, and critical to ensuring the expected economic benefits of the Hydropower Project are realised. If the AIFFP is unable to finance the Project, then SIG would need to seek financing from others, potentially MDBs or other bilateral donors. SIG formally requested our financing relatively early in the AIFFP's establishment – seeing us as a credible source of finance.

3. Project financials

3.1 Project cost

The estimated total Project (Transmission System) cost includes Infrastructure works, contingency on Infrastructure works, project implementation costs, taxes and duties, financing charges during construction and Project quality assurance and monitoring activities. AIFFP proposes to finance USD 22.9 million (with SIEA and SIG financing the remainder.

AIFFP due diligence concluded that the preliminary design is technically viable and revised the preliminary design cost estimates.

SIEA is in the process of procuring a Final Detailed Design (FDD), which is expected to be completed by June 2020. The FDD will enable an infrastructure works contractor procurement process to run over the course of the second half of calendar year 2020.

3.2 Financing package

Composition and structure

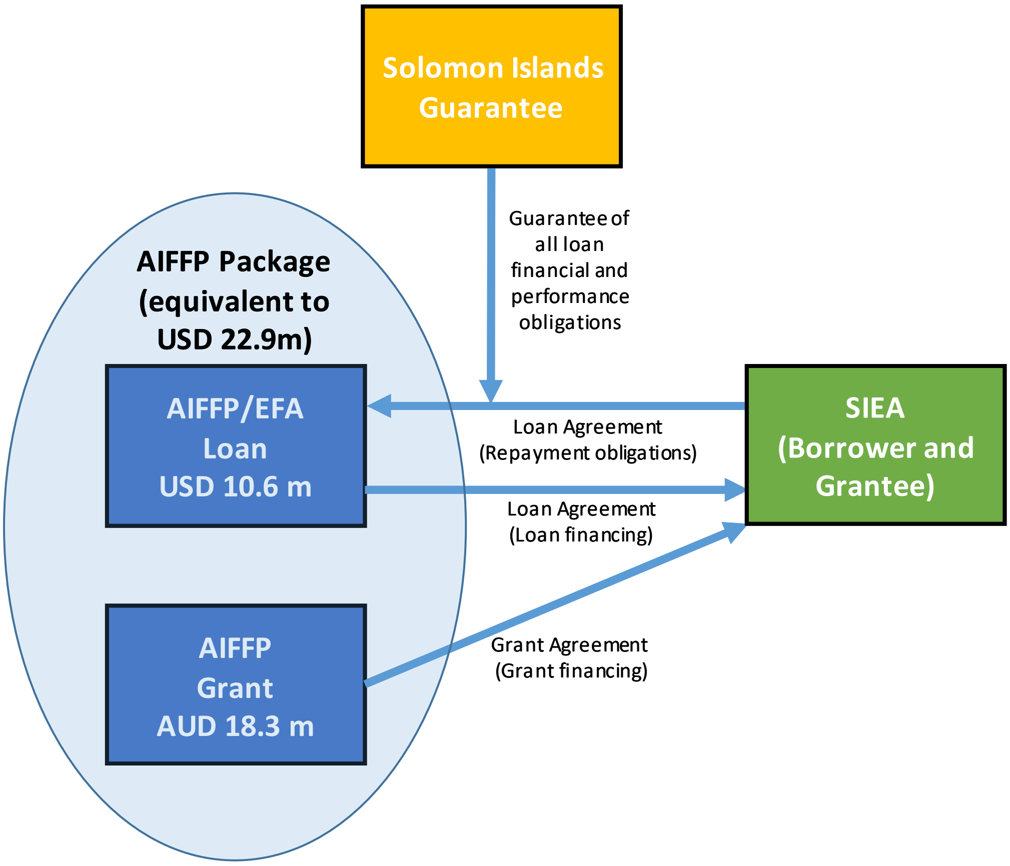
AIFFP is seeking Board endorsement of a ***financing package that is equivalent to USD 22.9 million***, to be provided directly to SIEA, comprising of ***USD 10.6 million in loan*** and up to ***AUD 18.3 million in grant (equivalent to USD 12.4 million)***, representing 46% and 54% of the total package respectively.

Given that the Infrastructure works contracts are expected to be USD denominated, the loan component will be denominated in USD (see 'Foreign exchange risk' section below). This will not expose the Commonwealth to any foreign exchange risk.

The Solomon Islands will be providing a guarantee (as 'Guarantor' under a Guarantee Agreement) to Export Finance Australia (EFA)[4], guaranteeing SIEA's financial obligations under the loan. The proposed financing structure is presented in the below diagram.

[4] As lender of record for AIFFP loans.

Diagram – Financing structure



3.3 Loan terms

The proposed AIFFP loan terms are provided in the below table.

Table – AIFFP loan terms

Loan Amount:	10.6 million
Currency Denomination:	USD
Term (years):	24
Repayment and interest payment frequency:	Semi-annual
Interest Rate:	Reference Rate + 0.80%
Reference Rate:	Variable facility: 6-month USD LIBOR **OR** Fixed facility: Priced off USD swap curve
Front-end Fee:	Not applicable for sovereign loans
Commitment Fee:	Not applicable for sovereign loans
Security:	Solomon Islands Guarantee

The Interest Rate outlined above (comparable to World Bank IBRD pricing) is at a level that covers the AIFFP's funding costs. Given that the proposed borrower is a wholly owned SOE, and the loan will be guaranteed by the Solomon Islands, SIEA is considered to be a 'sovereign borrower'[5], AIFFP loan pricing and terms are broadly based on the World Bank's International Bank for Reconstruction and Development (IBRD) pricing methodology. For a loan with the same weighted average term to maturity, IBRD would have lent with a margin to LIBOR of 0.78%, comprising of 0.48% in standard margin and 0.30% in maturity premium.

Based on the above pricing and terms, the AIFFP loan technically qualifies, under the OECD's Development Assistance Committee (DAC), as being Overseas Development Assistance (ODA) eligible.

4. Implementation, procurement and disbursement arrangements

SIEA will be the implementing agency. SIEA and the AIFFP have agreed in-principle a Project Administration Manual (PAM) that gives effect to the below requirements. The PAM includes reporting obligations on SIEA and monitoring and evaluation framework. The PAM will come into force on the date that all conditions precedent to Loan financial close are satisfied or waived.

A Project Management Unit (PMU) will be established within SIEA to coordinate implementation of the Project. SIEA will resource, with the following SIEA staff, such that the PMU is adequately equipped to ensure Project implementation, as required by the AIFFP: 1) Project Manager; 2) Project Accountant; 3) Transmission Engineer; 4) Environmental and Social Safeguard Specialist; 5) Gender Equality and Social Inclusion Specialist; and 6) Administration Assistant. AIFFP has assessed and is satisfied that the above SIEA staff are capable of performing the respective functions assigned to them. AIFFP will consider options to ensure climate change and natural disaster risk reduction expertise is provided to the PMU.

AIFFP has assessed SIEA's capacity to perform certain functions, essential to ensuring timely and quality outcomes, and has concluded that the above PMU SIEA staff should be supplemented and supported by the following consultant contractors: 1) Procurement Specialist; 2) Project Manager/Transmission Line Specialist; 3) Zone Substation Engineer; and 4) Works/goods Contract Manager. Prescribed procurement arrangements for the consultant contractors are outlined below.

4.1 Procurement and disbursement

SIEA will be responsible for engaging, procuring and funding a geotechnical investigation and Final Detailed Design (FDD) for the Project. AIFFP requires the geotechnical investigation to be completed and provided to the FDD consultant to consider and incorporate into the design, with a view to enabling fixed-price infrastructure works contract/s. Climate change and disaster risk considerations will be reflected in the design.

SIEA is required through the PAM to fund and procure the geotechnical investigation and FDD in accordance with its Board endorsed Tendering and Evaluation Policy and Procedures Manual. It is a condition precedent to Loan financial close that the FDD is reviewed and accepted by AIFFP and EFA as being technically viable and compliant with relevant design and build standards.

The PMU will be responsible for engaging and managing all consultant and infrastructure works contracts, all of which will be financed by the AIFFP. All contracts that are to be financed by the

[5] Referred to in part 65 of the AIFFP Design Document (Investment Design).

AIFFP package will be subject to a ***Prior Review[6] process***, whereby AIFFP will be the reviewer and will be required to provide a 'no -objection' at each stage of review. Prior Review will be undertaken at key stages (and of key documents) of the procurement and contracting phase, including at the pre-approach to market of tender documents, bid evaluation, selection and contracting. Through the Prior Review process, the AIFFP will seek to ensure quality procurement outcomes.

All consultant contracts will be procured, in accordance with the World Bank Procurement Framework, using the Quality and Cost-based Selection (QCBS) procurement method[7]. SIEA is required through the PAM to procure and engage the Procurement Specialist as the first contract. This sequencing requirement will ensure that remaining procurement is undertaken as required by the AIFFP.

All consultant contracts will be signed between SIEA and the consultant, and AIFFP financing used to pay these consultants will be ***disbursed using the direct payment method***, where contractors will be paid directly by the AIFFP and EFA. No funds will flow through SIEA to pay contractors.

The infrastructure works contract/s required for this Project will also be procured in accordance with the World Bank's Procurement Framework, using the open international competitive procurement (OICP), subject to the below with the below criteria as part of the selection, which will ensure high quality suppliers that have previously met SIEA and/or DFAT quality-focused criteria.

1. the bidder has experience in the electricity sector in the Solomon Islands and is, and/or was, party to a contract to provide electricity related goods or services in the Solomon Islands where the bidder is and/or had been, bound under the contract for nine or more months; and/or
2. the bidder to be a panel member on the to-be established DFAT Capital Infrastructure Services Panel, provided the bidder is not on a SIEA contractor blacklist.

As with the consultant contracts, AIFFP financing used to pay these Infrastructure works contractors will be ***disbursed using the direct payment method***, whereby loan and grant will be disbursed on a pro-rata basis consistent with 'infrastructure' AIFFP financing proportions.

4.2 Implementation timeline

To enable completion of the Project by the end of 2023 as required by the PPA, Project implementation will follow the below timeline:

- SIEA to procure geotechnical investigation – by end Q1 2020
- SIEA to procure FDD – by end Q1 2020
- FDD completed – by end Q2 2020
- Entire required easement registered – by end Q2 2020
- PMU to be setup – Q3 2020
- PMU to procure Procurement Specialist – Q3 2020
- PMU and Procurement Specialist to procure remaining consultant contracts – to span Q3 and Q4 2020

[6] This is a process described in the World Bank Procurement Framework whereby the financier requires, for example, that all tender documentation is provided to the financier, prior to release of tender documents to market. Whilst the World Bank's framework is being relied upon for this Project, AIFFP will be the reviewer.

[7] This is a method of procurement prescribed in the World Bank Procurement Framework that allows for appropriate weightings to be assigned to cost and quality when evaluating contract bids. Especially useful where the contract to be procured is of a technically complex nature, and it is appropriate for greater importance to be assigned to quality considerations when evaluating alternative vendors.

- Infrastructure works contract/s procurement process – to span Q3 and Q4 2020
- Infrastructure works contract/s signed – Q4 2020
- Infrastructure works contract/s begin construction – Q4 2020 or Q1 2021
- Infrastructure works complete for testing and commissioning – Q2 – Q4 2023
- Infrastructure works testing and commissioning – Q3 2023 – Q2 2024

Implementation, procurement and disbursement arrangements are summarised in the below table.

Table – Summary of implementation arrangements

Timeframes	
Start month	February 2020
Completion month	June 2024
Management	
Financial management entity	SIEA
Implementing entity	SIEA
Implementation unit	The PMU will be established within SIEA, with 6 SIEA staff as required and 4 consultant contracts, with: • Project Manager/Transmission Line Specialist to be full time and predominantly in-country; and • remaining three consultant contracts to be intermittent.
Procurement	
Prior Review	Applies to all contracts that will be financed by the AIFFP package.
Disbursement	
Direct Payment	Applies to all contracts that will be financed by the AIFFP package.
AIFFP loan and grant order	On a pro-rata basis, by project component, consistent with Project financing plan.

5. Economic analysis

5.1 Country analysis

Solomon Islands has the fourth-largest economy among AIFFP's investment partners (after PNG, Fiji and Timor-Leste), with a gross domestic product of almost AUD 1.4 billion in 2018. However, annual Solomon Islands per capita income is around USD 2,100. Having withstood the impacts of the global financial crisis, the economy grew by an average of 6.6% in 2008–2011, driven by expansions in logging output and mineral extraction. Economic indicators have been favourable but there are signs of a slowdown in 2019 and strains on the Government's budget are re-emerging. Logging exports have weakened with lower demand from China and growth is expected to slow to 2.7% in 2019. The country's longer term prospects depend on the development of more sustainable drivers of growth, including tourism and commercial services. This will need to be underpinned by a stable and reliable energy supply.

5.2 Project analysis

The Project is an associated piece of infrastructure that will enable the expected benefits of the Hydropower Project. It is therefore reasonable that the economic analysis for AIFFP's proposed financing is based on the expected benefits of the Hydropower Project as a whole, inclusive of the Project.

The primary direct benefit of the Hydropower Project, and the Project, will be a reduced reliance on diesel generation, which is expected to reduce both the cost, and variability in cost, of electricity generation in Honiara. This will reduce end user tariffs for both residential and commercial customers, alleviating pressure on household incomes and providing opportunity for improved government and community services and entrepreneurship. Increased urbanisation in Solomon Islands has resulted in informal settlements in Honiara and the surrounding areas, increasing the demand for electricity. The Hydropower Project and the Project will significantly increase the Solomon Islands' electricity generating capacity. Specifically, the Hydropower Project is expected to generate 70 – 80 gigawatt hours (GWh) per annum, which represents approximately 73 – 83% of Honiara's usage in 2018.

The AIFFP has relied on economic analysis undertaken by the World Bank and ADB and considered by their respective Boards as part of their evaluation process for Hydropower Project financing. Both entities concluded that the Hydropower Project, when modelled as a total infrastructure piece with the transmission line included, is expected to be economically viable. The ADB notes the Hydropower Project will improve economic conditions for Honiara in line with the Solomon Islands National Development Strategy, 2016–2035.

Most notably, the World Bank concluded that under the base case modelling assumptions, three quarters of the economic benefit expected to be derived from the Hydropower Project can be attributed to the displacement of diesel generation. The ADB concluded that the Hydropower Project is economically feasible because it exhibits an EIRR of 9.3%, which exceeds the ADB's assumed economic opportunity cost of capital (EOCC) of 9.0% for investment projects in the Solomon Islands. The ADB conducted a standard internal rate of return analysis on the expected economic benefits (including economic values attributed to avoided emissions) and costs (economic values derived by applying conversion factors to financial value) of the Hydropower Project and Project. Note that the ADB's economic assessment did not seek to quantify other project benefits that they would expect, including: 1) reduced exposure to volatility in international diesel prices; 2) lower disposal costs for used oil and oil filters; and 3) local public health benefits, with reduced emissions from diesel combustion lowering the risk of cardiovascular and cardiopulmonary diseases by improving air quality.

The ADB conducted sensitivity analysis to test the robustness of the Hydropower Project's economic viability under four different scenarios that included an increase in capital costs and a decline in diesel prices. The ADB concluded that whilst the Hydropower Project's EIRR falls below the minimum required EIRR of 9% in 3 of the 4 scenarios considered, the Hydropower Project is considered to be economically viable given that the scenario risks have been mitigated by robust project preparation and conservative estimation of benefits.

6. Climate change

The Solomon Islands, through the Ministry of Environment, Climate Change and Disaster Management (MECDM), recently launched its Climate Change Policy, highlighting steps SIG would take in aiding the country and its people to exist and adapt to present imminent climate change and its impact. The Policy aims to integrate climate considerations within the framework of national policies, and guide the government and its partners to ensure the people, natural environment and economy of the country are resilient and able to adapt to the impacts of climate change.

The Hydropower Project will primarily address climate change mitigation outcomes by supporting SIG's commitment to greenhouse gas emissions reduction. The Hydropower Project will displace diesel generation that currently supplies 73 – 83% of Honiara's annual electricity demand. It will lower the cost of electricity generation, and diversify generation capacity towards clean, renewable sources. In so doing, the Hydropower Project will meet 100% of Solomon Islands' international commitment for emissions reduction under the Paris Agreement.

The Hydropower Project will additionally provide the Solomon Islands with reservoir capacity, giving flexibility to the power system to enable higher penetration of photovoltaic without the need for large and expensive energy storage or diesel generators. It can also provide a replicable model for other Pacific island countries to use hydropower to balance variable solar power. In connecting the Hydropower Project to the Honiara distribution grid, the Project is fundamental to the realisation of the positive climate mitigation effects of the Hydropower Project.

Further climate change and disaster resilience elements of the Project will be considered by AIFFP during the design phase alongside specialist advisers engaged, primarily through DFAT's Australia Pacific Climate Partnership. The AIFFP will integrate climate change and resilience considerations across the construction, operation and ongoing maintenance of the Project.

7. Gender equality and social inclusion

Gender inequality and social exclusion challenges within the Solomon Islands include poor representation of women at all levels of decision-making; higher reliance by women on land-based livelihoods (particularly the cultivation and sale of market produce); the lower education and literacy rates of women; and the prevalence of certain ingrained cultural attitudes – particularly amongst some of the male elites in the project area - that normalize the subordination of women and create resistance towards gender equality efforts.

With support provided by the World Bank's East Asia Pacific (EAP) Gender and Energy Facility, a Gender Action Plan (GAP) was developed for the Hydropower Project in 2017 (the 'GAP') to guide the mainstreaming of gender into the Project with a particular focus on ensuring that women are not negatively impacted by the Project and promoting equal opportunities for women and men to participate in project benefits. SIEA play an executive, monitoring role in GAP implementation through participating in the Tina River GAP Steering Committee.

As part of this project's preparation AIFFP worked with SIEA to identify areas within the GAP that SIEA can prioritise in the Project, in particular by identifying opportunities where SIEA and contractors can further promote women's participation and wellbeing in construction activities. A dedicated 'Component 3 Gender Action Plan' (GAP, 2020) was developed and agreed with performance targets for SIEA in the following areas:

1. ensuring gender equality in opportunities for education, skill building, training and safe employment
2. promoting the voice, participation and empowerment of women, and reducing opportunities for elite capture of funds and risks to women and girls

3. increasing organizational capacity for gender mainstreaming

To drive performance and reporting, SIEA will appoint at least one permanent staff to coordinate, monitor and report on the progress of the GAP, in collaboration with the Tina River Project Office Gender Specialist.

8. Risk assessment

8.1 Risk Summary

The AIFFP has assessed the Project to have a residual risk rating of moderate.

The AIFFP has assessed country risk as high, reflecting the level of political instability, extreme weather events and risk of corruption and poor governance within Solomon Islands. To mitigate this risk, the AIFFP has engaged closely with DFAT's bilateral program in Solomon Islands and will draw heavily on the relationships and expertise of Australia's diplomatic mission in Honiara. The AIFFP will also draw on DFAT's deep expertise delivering infrastructure in challenging operating environments, including Solomon Islands.

Residual financial risk has also been assessed to be high. The AIFFP has put in place a range of mitigants which have reduced interest rate risk, exchange rate risk and refinance risk.

The AIFFP has particularly focused on mitigating compliance and implementation risk. DFAT is drawing on, and where necessary, extending the quality assurance and due diligence processes of our co-investors in the design and implementation of the Project. The AIFFP has ensured that the Environmental and Social Management Plan has been finalised (and agreed by SIEA) such that it complies with all aspects of DFAT's compliance and safeguard requirements which includes Australian WHS standards. The AIFFP will establish monitoring and evaluation processes to ensure the ESMP is complied with throughout implementation. To further address implementation risk, the AIFFP has significantly bolstered the capacity of the Project Management Unit which will be housed within SIEA to implement the Project. The AIFFP will closely monitor the operation of the PMU.

More detail of each risk category discussed below and a summary of risk in the below table. In accordance with the AIFFP risk policy, risk ratings will be reviewed at the end of each quarter, or sooner if there are shifts in the risk profile of the Project. The grant component of the AIFFP's financing for the Project allows for resources for monitoring and evaluation of risks and mitigants, which will be more intensive during the construction period.

Table – Risk Summary

DFAT Rating	Low	High	High	Moderate	Moderate
DFAT Risk Weighting	*20%*	*15%*	*15%*	*30%*	*20%*
Overall Risk Rating					
DFAT Rating	Moderate				

8.2 Reputational risk

The Hydropower Project is a long-standing project, which has been scrutinised by the SIG and a range of donors for many years. In addition, SIG wrote to AIFFP requesting financing for this project demonstrating alignment with SIG priorities. DFAT has previously funded elements of the Tina River project - demonstrating previous support from the Australian Government and ongoing complementarity.

The project contributes to reduced carbon emissions and lower electricity prices for the people of Honiara. There is no land acquisition associated with the Project so AIFFP does not anticipate any negative reactions at the community level.

Residual reputational risk is rated as low.

8.3 Country risk

DFAT Country Risk Assessment

The World Bank Doing Business score for the Solomon Islands is currently 55 (on a scale of 0 – 100, where 100 is the best place to do business). The Worldwide Governance Indicators, a set of six composite measures which aggregate a range of reputed data sources on governance, rank the Solomon Islands 62.6 for political stability, 49.5 for control of corruption and 15.4 for government effectiveness (percentile ranks indicate the percentage of countries worldwide which rank lower; so higher values indicate better governance scores).

Honiara experiences extreme weather conditions and natural hazards – storm surges, cyclones, high rain fall as well as earthquakes. While transmission lines are, by their nature, less exposed to climate-related events, the AIFFP will ensure climate change and disaster resilience considerations are incorporated in the design of the Project.

The AIFFP has been established to provide financing in emerging and developing countries and must engage effectively with country risk to do this.

Country risk is partly mitigated by capitalising on the experience of the Australian aid program and diplomatic mission in Honiara in delivering investments in challenging operating environments, including a strong bilateral program in the Solomon Islands. Australia's aid program in Solomon Islands focuses on three strategic objectives which are complementary to the AIFFP’s proposed financing:

1. Supporting stability;
2. Enabling economic growth (infrastructure is a key element of this, including support for the Hydropower Project); and,
3. Enhancing human development.

Australia’s diplomatic mission in Honiara provides representative and reporting functions for the AIFFP including on macroeconomic issues, the political economy, governance and infrastructure issues.

Residual country risk is rated as high.

8.4 Financial risks

Based on an assessment of credit risk, interest rate risk, exchange rate risk and refinance risk, the AIFFP has assessed the residual financial risk exposure associated with the loan to be high.

8.4.1. Credit risk

AIFFP has two distinct credit risk exposures on the proposed loan, being to:

1) SIEA; and
2) Solomon Islands.

Analysis of credit risk is provided in detail below. AIFFP has sought to mitigate credit risk by addressing a range of financial risks, including interest rate risk and foreign exchange risk. However, residual credit risk of the Project remains high. This is primarily related to sovereign risks that are common across the region. This is recognised within the AIFFP's high financial and country risk tolerance.

SIEA

SIEA is a public corporation, established on 1 January 1969, under the Electricity Act of 1969. It is also governed under the provisions of the State Owned Enterprises Act (SOE) of 2007. SIEA is governed by a Board of Directors appointed by the Minister of Mines, Minerals, Energy and Rural Electrification (MMERE). Under the SOE Act, responsibility for appointing the Board is shared between the Minister of MMERE and the Minister of Finance. This ensures that the appointees have the necessary skills. The daily operations of SIEA are delegated to the General Manager, who is presently an expatriate.

With technical and financial support provided by the World Bank, SIG initiated an organisational and financial restructuring of SIEA in 2008. Pre-restructure, the Solomon Islands electricity network was unreliable and expensive, and as a result, the financial performance of SIEA was poor. In 2011, three years into the restructure, demonstrable gains were made in system reliability and affordability, and as a result, SIEA produced positive financial results.

Since 2011, SIEA has been profitable and has had financial statements audited, with unqualified audit opinions being provided from 2014-2018 (inclusive). A summary of SIEA's historical financial position and performance since 2014 is included in the below table. SIEA's average Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) margin over the five years was 31%, which demonstrates that entity profitability is been relatively protected against the possibility of rising operational costs. SIEA's liquidity ratio has been strong, with an average of 7.7 over the period, largely driven by a consistently strong, and improving, cash position.

SIEA currently carries very little debt, and does not plan to incur material levels of new debt over the next five years[8].

[8] Not including the proposed AIFFP loan, SIEA expects its corporate debt to equity ratio to peak at 15% over the next 5-years, with a peak stock of short and long term debt of ~USD 6.2 million.

Table – SIEA financial position and performance 2014-2018

	2014	2015	2016	2017	2018	
Financial position						
	USD					
	2014	2015	2016	2017	2018	
Total current assets	30,949,645	33,932,544	43,946,967	41,519,685	48,822,131	
Including cash	*9,135,663*	*18,341,706*	*24,464,397*	*26,971,854*	*36,908,572*	
Total non-current assets	56,694,400	67,573,135	87,220,294	96,926,121	108,294,771	
Total assets	87,644,045	101,505,679	131,167,261	138,445,806	157,116,902	
Total current liabilities	3,438,759	4,397,045	6,435,156	5,048,693	7,005,969	
Total non-current liabilities	3,635,102	3,565,275	6,739,432	6,177,421	11,599,975	
Total liabilities	7,073,861	7,962,320	13,174,588	11,226,114	18,605,944	
Net asset position/Equity	80,570,184	93,543,359	117,992,673	127,219,692	138,510,958	
Financial performance						
	USD					
	2014	2015	2016	2017	2018	
Operating income	56,416,954	54,371,300	54,769,026	53,622,992	57,035,046	
Including electricity sales	*54,301,358*	*53,490,297*	*53,203,452*	*52,049,643*	*55,590,210*	
Expenses	42,322,755	41,526,672	39,634,064	43,961,082	47,317,028	
Including cost of generation and distribution	*30,914,587*	*25,039,063*	*22,781,624*	*25,244,398*	*27,259,690*	
Operating expenses	*11,408,167*	*11,556,771*	*11,258,010*	*12,460,645*	*13,165,932*	
EBITDA	14,094,200	17,775,466	20,729,392	15,917,948	16,609,424	
Debt position						
Short and long term debt	-	-	67,048	355,680	1,766,514	
Interest payments	-	-	-	47,349	3,701	
Principal repayments	-	-	-	1,778,040	437,638	
Debt servicing	-	-	-	1,825,390	441,339	
Ratios						
						5yr average
EBITDA margin	25%	33%	38%	30%	29%	31%
Liquidity ratio	9.0	7.7	6.8	8.2	7.0	7.7
Debt Service Coverage Ratio (DSCR)	-	-	-	8.7	37.6	9.3
Source: SIEA Annual Reports 2014-2018						

SIEA's strong EBITDA margins and liquidity ratios are underpinned by the Electricity Act, which regulates retail electricity tariffs through a price setting mechanism, which enables SIEA to charge its customers a tariff that recoups for:

- its cost of generation, adjusted for changes in exchange rates (captures both diesel and capacity payments made to Independent Power Producers (IPPs));
- depreciation on its Regulated Asset Base (RAB), which includes all transmission and distribution infrastructure; and
- the cost of capital on the RAB, using a Weighted Average Cost of Capital (WACC) of 10.34%[9].

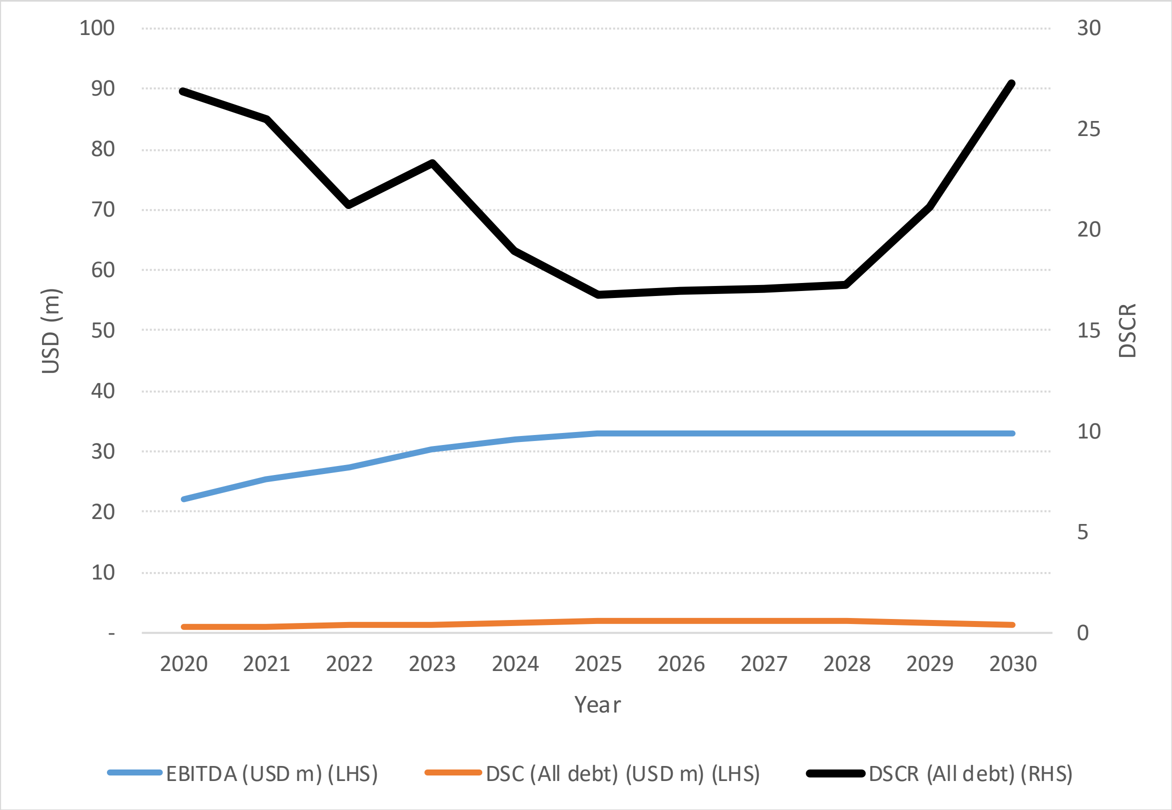
SIEA's expected capacity to service the proposed AIFFP loan is demonstrated in the below chart that profiles 10 year:

1) EBITDA (N.B. SIEA is exempt, as an SOE, from income tax payable to SIG):
2) scheduled annual corporate-level Debt Service Cost (DSC) (i.e. principal and interest, for all debt, including current debt and expected new debt such as the AIFFP loan); and

[9] Solomon Islands Gazette 13 December 2016.

3) corporate-level Debt Service Coverage Ratio (DSCR), that is EBITDA / DSC.

Chart – SIEA's capacity to service the proposed AIFFP loan



Based on the DSCR profile, the strong historical EBITDA margin and given the minimal risks to SIEA's revenue (see below), SIEA demonstrates sufficient earnings capacity to withstand potential revenue shocks and service AIFFP's loan.

AIFFP's credit risk exposure to SIEA is a function of SIEA revenue risk, which is driven by both the retail price of, and demand for, electricity. Given that the tariff setting mechanism is legislated, pricing risk is of a legal nature (i.e. legislative change). There is currently no indication that changes are being considered to the Electricity Act that would compromise SIEA's ability to set a retail tariff at a level that enables them to recoup the cost of transmission and distribution (i.e. principal and interest on AIFFP loan).

Duration mismatch risk can contribute to AIFFP's credit risk exposure and refers to the risk that a default can be attributed to a mismatch in the profile of revenues (which are expected to be generated by a project) and the Debt Servicing Requirement profile associated with the loan.

This risk has been broadly mitigated as the repayment profile of the proposed AIFFP loan has been structured to be consistent with the economic life of the infrastructure works. Under the current regulated tariff setting mechanism, SIEA will recoup from its customers the capital cost of, and cost of capital associated with, this infrastructure over its economic life.

Solomon Islands

Whilst a direct lend to SIEA is being proposed for this Project, AIFFP's ultimate credit risk exposure on the proposed AIFFP loan is to the Solomon Islands, as guarantor of the loan. The AIFFP has sought to evaluate the risk of default associated with the Solomon Islands.

IMF/World Bank Debt Sustainability Framework

The International Monetary Fund (IMF) and World Bank regularly conduct Debt Sustainability Analyses (DSA) of the Solomon Islands in accordance with their joint Debt Sustainability Framework (DSF) for Low Income- Countries (LICs). The IMF undertook a DSA of the Solomon Islands in 2019 as part of an Article IV mission and concluded that Solomon Islands ***is at moderate risk of both external debt distress and overall debt distress, with substantial space to absorb shock.*** This DSA accounted for the existing stock of contracted Public and Publicly Guaranteed (PPG)[10] debt known at the time of analysis, plus all new expected and programmed debt over a 10-year forward horizon, including all:

- debt related to the Hydropower Project, plus the expected debt related to this Project; and
- programmed ADB and World Bank debt, including for IDA 18 and 19.

Given that the proposed borrowing for this Project was included in the 2018 DSA, the AIFFP concludes that the provision of the proposed AIFFP loan will not result in a deterioration of the Solomon Islands' risk of debt distress to 'high'. The AIFFP therefore concludes that the contingent liability that will be created on the Solomon Islands balance sheet by the proposed AIFFP loan, and associated guarantee, is both sustainable and affordable for the Solomon Islands.

8.4.2 Foreign exchange risk

AIFFP/EFA will not bear any foreign exchange risk exposure on the proposed transaction. SIEA will bear a foreign exchange risk exposure on this transaction as it earns revenue predominantly in Solomon Dollars (SBD), but will be making loan repayments to AIFFP in USD. SIEA's balance sheet does not generate any USD denominated revenue that could create a natural hedge for the USD denominated loan repayments.

Notwithstanding, SIEA's foreign exchange risk is somewhat mitigated by the Central Bank of Solomon Islands' policy to manage the SBD as a conventional peg against a trade weighted basket of currencies, which is dominated by the USD. This peg reduces volatility in the USD/SBD cross-rate.

Given the low trading volume of the SBD (and absence of an efficient domestic debt securities market), there are no efficiently priced SBD based currency hedging products that could be made available to SIEA, as part of the AIFFP package, to totally mitigate SIEA's foreign exchange risk exposure on this transaction.

8.4.3 Interest rate risk

AIFFP/EFA will not bear any interest rate risk exposure on the proposed transaction. EFA have indicated that they will fund on terms that match the interest rate basis (i.e. fixed or variable) selected by SIEA on the AIFFP loan.

[10] PPG includes all direct borrowing by the Solomon Islands and its State Owned Enterprises, plus all explicit Solomon Islands contingent liabilities.

SIEA will be exposed to interest rate risk if they select the variable-rate AIFFP loan option. Conversely, SIEA will mitigate interest rate risk if they select the fixed rate AIFFP loan option and lock in a fixed interest rate that is priced off the USD swap curve.

In a typically upward sloping swap curve environment, there is a cost trade-off associated with mitigating interest rate risk. However, given the relative flatness of the curve at present, combined with historic lows of absolute yields, borrowing under the fixed-rate option represents a relatively good value hedge for SIEA. SIEA will make a decision on the interest rate basis upon signing of the loan agreement.

8.4.4 Refinance and reinvestment risks

AIFFP's and EFA's refinance and reinvestment risk exposures will be minimised as the EFA has indicated it will fund AIFFP loans on portfolio basis, seeking to match duration as best as possible where it is cost effective to do so. On this basis, refinancing and reinvestment risks will be minimised.

It is expected that SIEA will repay the loan from profits it generates, as opposed to refinancing. SIEA will not be exposed to reinvestment risk as the AIFFP loan will not pre-fund Project costs.

Residual financial risk is rated as high.

8.5 Compliance risk

8.5.1 SIEA and Solomon Islands

Under the Solomon Islands Public Financial Management Act (PFMA):

(i) the Minister for Finance is the sole authority that may enter into debt obligations and/or provide sovereign guarantees;
(ii) any SOE that contemplates direct borrowing must seek consent from the Minister prior to entering into the arrangement; and
(iii) before providing in-principle agreement to either of the above, the Minister must seek out the advice of the Solomon Islands Debt Management Advisory Committee (DMAC).

The DMAC provided its advice to the Minister on the probity of providing a sovereign guarantee and consent for SIEA to enter into the proposed AIFFP loan. The process to date is compliant with the Solomon Islands legal and policy framework.

The AIFFP has since received a letter from the Minister providing in-principle agreement to provide the guarantee and confirmation that SIEA has been provided consent to borrow directly from the AIFFP for this Project.

8.5.2 Environmental and Social Safeguards

With guidance provided by the World Bank, SIEA had completed, and provided to the AIFFP, draft versions of an:

- Environmental and Social Management Plan (ESMP) (that includes a risk assessment); and
- Abbreviated Resettlement Action Plan (ARAP).

The Project ESMP and ARAP cascade from the Hydropower Project Environmental & Social Impact Assessment (ESIA), and were developed in accordance with the Solomon Islands Environment Act (1998) and World Bank Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts.

The AIFFP engaged a social safeguards consultant to conduct due diligence on the Project's social safeguards and the above plans to test the robustness of the:

- land acquisition and registration of easement process for the transmission line;
- resettlement and land user compensation processes; and
- reporting and monitoring process proposed for the Project, with consideration to aligning the reporting and compliance system established for the Hydropower Project.

In addition, the due diligence tested whether the Project's social safeguards comply with DFAT's Environmental and Social Safeguard Policy and the International Finance Corporation's (IFC) Performance Standards. This includes adherence to relevant Australian laws and regulations including the Workplace Health and Safety Act and the Modern Slavery Act

An AIFFP consultant conducted in-country work, which included consultations with affected people, and was required in their report to provide AIFFP with recommendations of remedial actions, where social safeguards compliance and reporting gaps were identified. Minor gaps were identified, and the recommended remedies have been incorporated into finalised and agreed versions of the ESMP and ARAP, which now meet DFAT and IFC safeguards policies. It is a necessary condition of AIFFP finance, through the PAM, that SIEA delivers on these plans as outlined and meets their reporting obligations under these plans as agreed.

The transmission line will utilise an easement that traverses over registered land only: no acquisition of customary land has been required for this Project. SIEA was required to obtain all land access and use rights for the transmission line as a condition precedent to achieve close of the Hydropower Project PPA. This condition was met to the satisfaction of THL and the consortium of Hydropower Project financiers, including the World Bank, in December 2019. The due diligence concluded that the easement has been registered in accordance with Solomon Islands law.

Residual compliance risk is rated as moderate.

8.6 Implementation risk

8.6.1 Borrower procurement capacity and financial management

Given the involvement of the World Bank and other donors in the Hydropower Project, there has been a high level of rigor of implementation risk and establishment of donor-supported systems within SIEA that the AIFFP is able to rely upon, with some supplementation.

The AIFFP has conducted a Procurement Capacity Assessment (PCA) and Financial Management Assessment (FMA) of SIEA, which have relied on FMAs and PCAs conducted by the World Bank of SIEA in 2018 and 2019. These assessments have aimed to determine the borrower's capacity to fulfil its fiduciary obligations with respect to finance being provided by the AIFFP.

AIFFP concluded that the Project implementation, procurement and disbursement arrangements outlined above in this paper should be incorporated into the design of this Project design so as to reduce risk around SIEA upholding their fiduciary responsibilities. These arrangements (i.e. acceptable procurement methods, Prior Review process and sequencing of contracting) have been incorporated into the PAM, and provision of AIFFP finance for the Project is contingent, through the Loan and Grant Agreements, on SIEA undertaking procurement as prescribed in the PAM. Compliance with the PAM will be subject to monitoring and compliance checks by the AIFFP during Project development.

AIFFP has determined that the PMU, staffed with SIEA staff, supplemented with at least four consultants are capable of performing the respective functions assigned to them. The PMU will be subject to regular audits.

AIFFP commissioned due diligence on the Project preliminary design and it has been assessed to be technically viable. The due diligence tested the optimal technical configuration for all components, including transmission pole foundation design and pole heights and line design. The design is based on analysis of Solomon Islands' conditions to ensure that the proposed systems are suitable for local conditions. A Final Detailed Design (FDD) will be completed by end of the Q2 2020. The FDD will form an integral part of the tender document suite to procure suitable infrastructure works contractor/s.

COVID-19 continues to evolve. The AIFFP expects it will have an impact on the ability to travel (AIFFP staff, counterparts and contractors), the ability of technical advisers and international PMU staff to commence their positions, the availability of workers, and the supply chain. The AIFFP will continue to work with DFAT's broader efforts and coordination on COVID-19.

Residual implementation risk is rated as moderate.

9. Non-concessional borrowing policy (NCBP)

The World Bank's non-concessional borrowing policy (NCBP) is designed to discourage countries receiving World Bank grants from incurring new debt that does not satisfy NCBP stipulated thresholds for the level of grant element. This grant element threshold for the Solomon Islands is 35%. Under the NCBP, which is currently being reviewed, the Bank retains scope to reduce the volume of IDA grants or harden lending terms for highly debt distressed countries that incur new external debts that exhibit grant elements that are less than the NCBP prescribed thresholds.

Australia has been a very strong supporter of the World Bank and ADB's policy dialogue in the Pacific to discourage countries receiving grants from the MDBs to take on new non-concessional external sovereign loans. AIFFP intends to promote the credibility of the NCBP by ensuring compliance when AIFFP financing is being proposed to relevant countries.

The proposed AIFFP loan for the Project exhibits a grant element of ~20%. The minimum grant element of the AIFFP package is ~52%. World Bank staff have reviewed the Project design and documentation and have confirmed that the AIFFP's loan and grant are sufficiently integrated, such that the grant element of the entire package will be assessed against the NCBP threshold of 35% for the Solomon Islands. AIFFP's proposed package is compliant with the NCBP.

10. Proposed media and communications approach

As this is possibly the first loan to be announced under the AIFFP, the Project would feature as a lead priority in the AIFFP and Pacific Step-up strategic communications plans in 2020. Messaging for the financing will be developed to communicate the transformative benefits the project will bring to Solomon Islands' economic development and to the people of Honiara and surrounding areas. The considerable greenhouse gas emission reductions the project is expected to deliver also presents a strong communications opportunity for Australia's climate change advocacy in the Pacific.